



**ICANN**

**55**

**MARRAKECH**

5 – 10 March 2016

# ICANN55 Technical Report

5-10 March 2016

**ICANN | PUBLIC MEETINGS**

## What is an ICANN Public Meeting and what happens?

---

ICANN meetings provide the opportunity for an internationally diverse group of individuals and organizations to come together to discuss and develop policies for the Internet's naming systems.

ICANN's international meetings have been a staple of ICANN's multistakeholder bottom-up consensus-building model since its formation in 1998.

## Why are we publishing technical data from ICANN Public Meetings?

---

Just like any other event, ICANN meetings need to innovate, adapt and evolve to meet their purpose: to support ICANN's multistakeholder model. One of the challenges that conference organizers face is to improve the conference, meeting after meeting, and maximize attendees' engagement and satisfaction.

This is where meeting data comes into play. This data provides reliable information on what attendees want, what ICANN is doing well and where ICANN has opportunities to improve. By leveraging this data, we can be a stable and transparent organization that is responsive to our community's needs.

For ICANN55, beyond the graphs and charts, we have published the raw data for each area. One of our biggest challenges is to standardize the information that we collect to ensure that data is consistent. Over the past few meetings, we have automated the collection of data through improvements in the registration system and meeting management software. Ultimately, our goal is to continue to improve on our metrics and to provide our community with more valuable data.

If you would like to learn more about ICANN Meetings Technical Services or have questions about this technical report, please contact: [mts@icann.org](mailto:mts@icann.org).

## Where can I find more information about ICANN Public Meetings?

---

Each meeting has a dedicated website that acts as a broad guide to the conference with details on the venue, information about the local area, a program of social events during the week, and answers to frequently asked questions about ICANN meetings.

To find out how to participate, go to <https://meetings.icann.org/en/about>.

To learn more about the Fellowship Program, go to <http://www.icann.org/en/fellowships>.

For a schedule of past and upcoming meetings, go to <http://meetings.icann.org/calendar>.

For the press page, go to <http://www.icann.org/en/press>.

If you belong to an organization that is interested in having an exhibit at a meeting or in sponsoring a meeting, please contact: [meeting-sponsorship@icann.org](mailto:meeting-sponsorship@icann.org).

# ICANN55 Statistical Summary

1. Attendee Profiles

---

2. Session Statistics

---

3. Mobile App Statistics

---

4. Remote Participation Statistics

---

5. General Information

---

6. Network Operations Center

---

7. Network Statistics and Client Profiles

---

# ICANN55 Technical Report

## Attendee Profiles

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

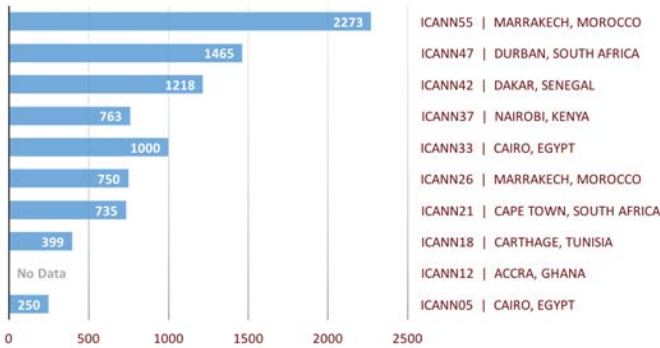
# ICANN55 Attendee Profiles

## Attendee Profiles for Marrakech, Morocco

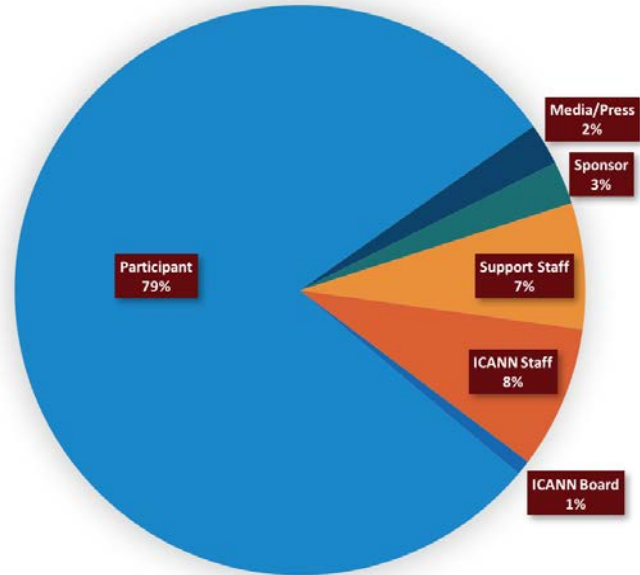
ICANN55 had a record number of **2273** attendees, making this the highest-attended ICANN meeting in the African region.

The attendee profile metrics for ICANN55 are derived from data that users self identify during the meeting registration process.

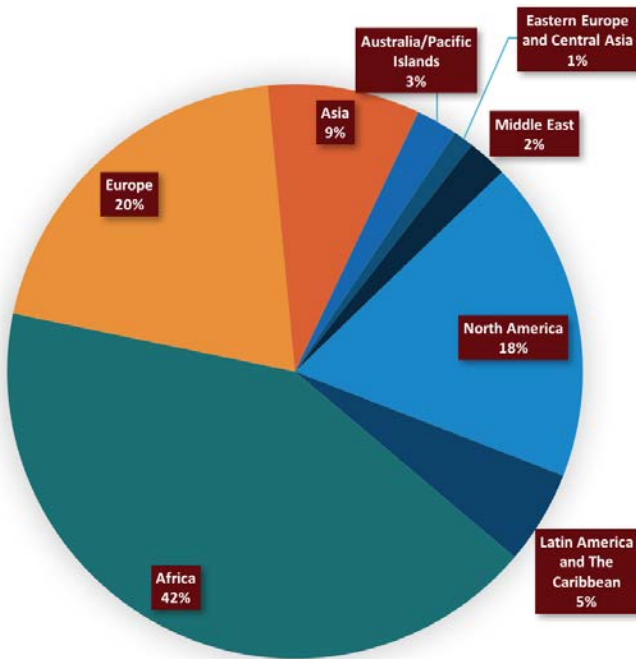
Attendee Counts for ICANN Meetings in Africa



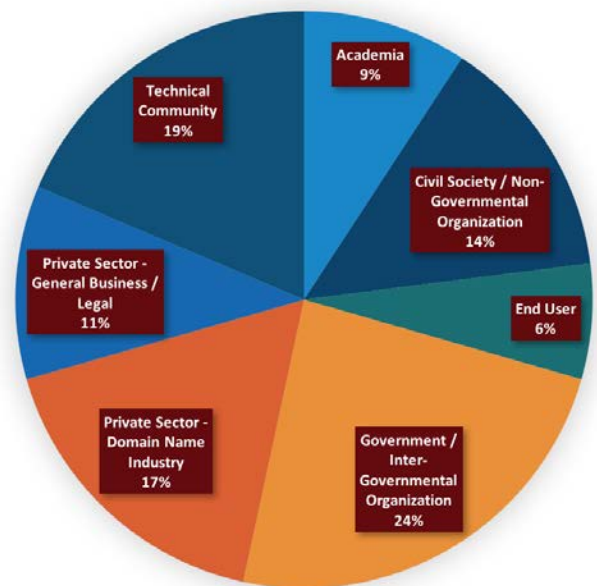
## ICANN55 Attendee



## ICANN Attendee Regional Profile

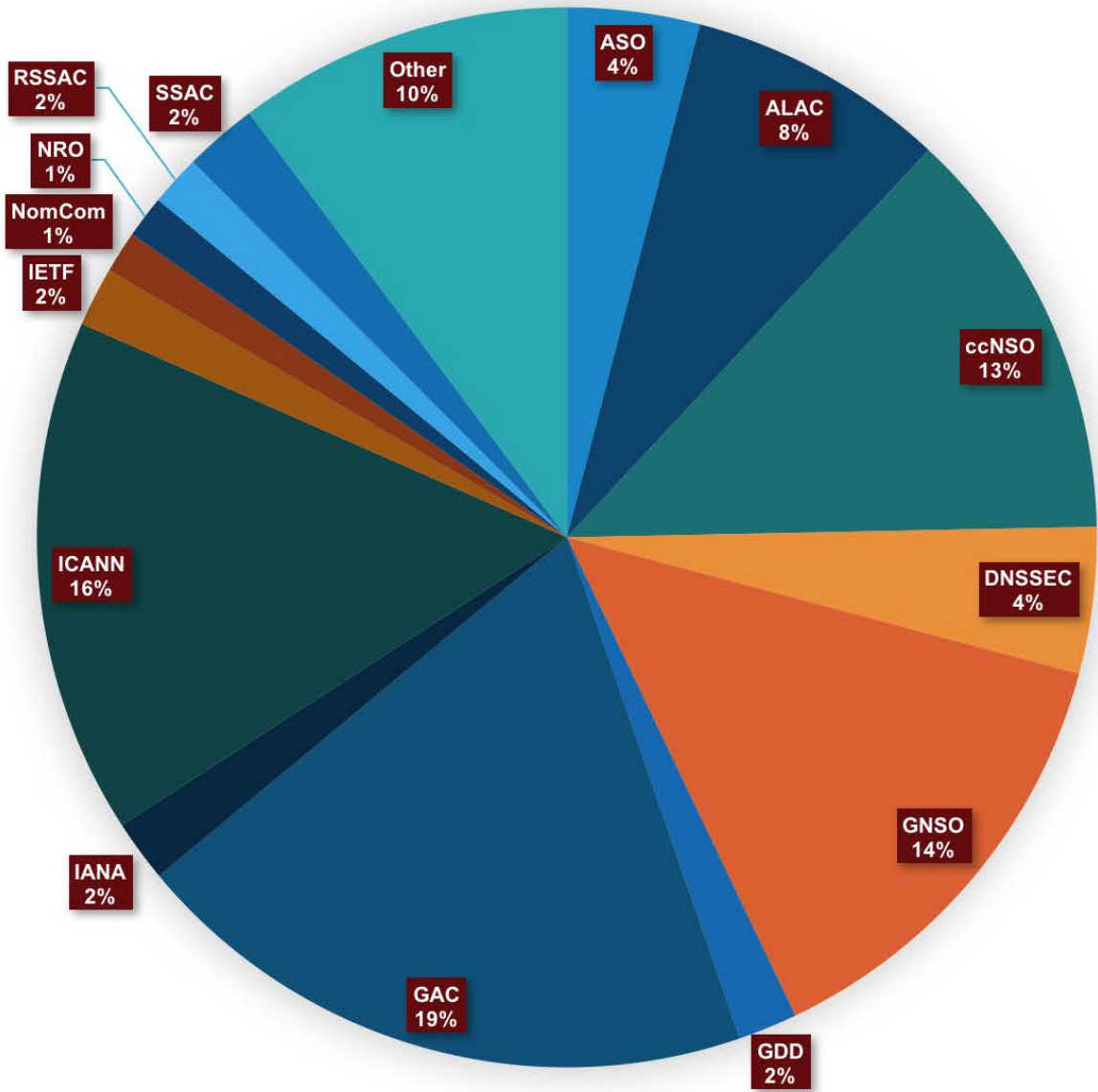


## ICANN55 Stakeholder



# ICANN55 Attendee Profiles

## ICANN55 Areas of Interest



- ASO - Address Supporting Organization
- ccNSO - Country Code Names Supporting Organization
- GNSO - Generic Names Supporting Organization
- GAC - Governmental Advisory Committee
- ICANN - Internet Corporation for Assigned Names and Numbers
- NomCom - Nominating Committee
- RSSAC - Root Server System Advisory Committee
- ALAC - At-Large Advisory Committee
- DNSSEC - Domain Name System Security Extensions
- GDD - Global Domains Division
- IANA - Internet Assigned Numbers Authority
- IETF - Internet Engineering Task Force
- NRO - Number Resource Organization
- SSAC - Security and Stability Advisory Committee

# ICANN55 Attendee Profile Data

<b>Badge Type</b>	
Participant	1793
Media/Press/Journalist	54
Sponsor	55
Support Staff	162
ICANN Staff	183
ICANN Board	19

<b>Stake Holder Classifications</b>	
Academia	147
Civil Society / Non-Governmental Organization	220
End User	103
Government / Inter-Governmental Organization	382
Private Sector - Domain Name Industry	274
Private Sector - General Business / Legal	173
Technical Community	297

<b>Stakeholder Classifications</b>	
Academia	147
Civil Society / Non-Governmental Organization	220
End User	103
Government / Inter-Governmental Organization	382
Private Sector - Domain Name Industry	274
Private Sector - General Business / Legal	173
Technical Community	297

<b>ICANN Areas of Interest</b>	
ASO - Address Supporting Organization	47
ALAC - At-Large Advisory Committee	92
ccNSO - Country Code Names Supporting Organization	148
DNSSEC - Domain Name System Security Extensions	52
GNSO - Generic Names Supporting Organization	160
GDD - Global Domains Division	21
GAC - Governmental Advisory Committee	224
IANA - Internet Assigned Numbers Authority	22
ICANN - Internet Corporation for Assigned Names and Numbers	183
IETF - Internet Engineering Task Force	21
NomCom - Nominating Committee	15
NRO - Number Resource Organization	15
RSSAC - Root Server System Advisory Committee	18
SSAC - Security and Stability Advisory Committee	26

<b>Regional Location</b>	
North America	412
Latin America and The Caribbean	120
Africa	956
Europe	460
Asia	195
Australia/Pacific Islands	53
Eastern Europe and Central Asia	26
Middle East	51

# **ICANN55 Technical Report**

## **Session Statistics**

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016



# ICANN55 Session Statistics

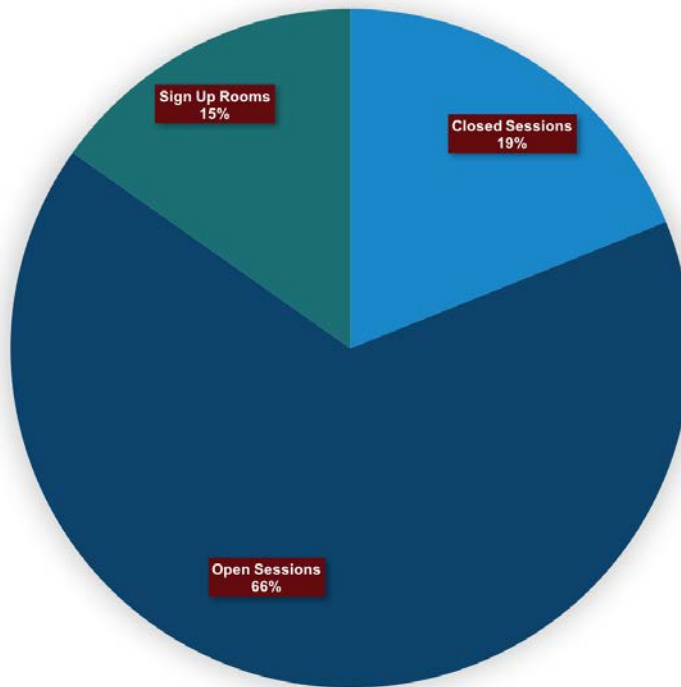
## Session Statistics for Marrakech, Morocco

Each “type” of session has a different structure and purpose:

- Open sessions are open to everyone, and are supported with remote participation tools for additional outside participation.
- Closed sessions are typically open only to members of a specific group, and may have limited remote participation.
- Sign Up Rooms are on-site impromptu meetings, held in session rooms that have open time slots.

This chart breaks down attendance by session type.

Counts by Session Type

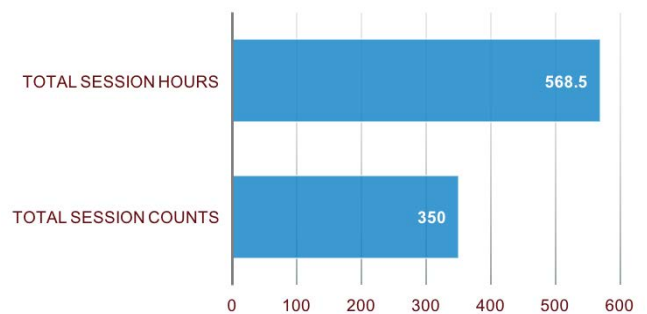


Actual Attendance for All Sessions

9,617

Based on Hourly Counts of Session Rooms

Session Count and Session Hours



# ICANN55 Session Statistics

## Session Attendance – Top 50 Sessions

This list ranks the top 50 sessions based on attendance. The attendance number comes from midsession manual headcounts done every hour. The count includes only people who were physically present in the session room at the time of the count.

	Session Title	Attendance
1	Welcome & President's Opening Session	1084
2	Public Forum 1	656
3	ICANN Public Board Meeting	315
4	Public Forum 2	310
5	GAC High Level Governmental Meeting	298
6	GAC Sunday afternoon sessions	228
7	GAC meeting with the ICANN Board	223
8	GAC Human Rights and International Law WG meeting	202
9	GAC Sunday morning session	195
10	GAC Saturday sessions	172
11	IANA Stewardship Transition Implementation	170
12	GAC Tuesday afternoon sessions	161
13	New gTLD Program Reviews and Related Activities	160
14	GAC Tuesday morning sessions	153
15	GAC Wednesday morning sessions	148
16	GAC HRIL and CCWP on ICANN's Corporate and Social Responsibility to Respect HR	140
17	Joint Meeting of the ICANN Board & the ccNSO	136
18	GAC meeting on two character codes Implementation	130
19	GNSO Working Session	112
20	Exploring the "public interest" within ICANN's remit	112
21	Africa Strategy and looking ahead	108
22	Industry Best Practices -- the DNA's Healthy Domains Initiative	104
23	GNSO Council Public Meeting	100
24	Joint Meeting of the ICANN Board & the Commercial Stakeholders	98
25	Joint AFRALO-AfrICANN Meeting	95
26	ccNSO Members Meeting Day 1	90
27	GAC Thursday sessions	87
28	ccNSO Council Meeting	83
29	Registrars and Law Enforcement	80
30	Joint Meeting of the ICANN Board & the Non-Commercial Stakeholders	78
31	Joint Meeting of the ICANN Board & the At-Large	78
32	Joint ccNSO/GNSO Council meetng	76
33	Internet Governance Public Sesssion	74
34	Newcomer ICANN Overview Day	73
35	Tech Day	70
36	DNSSEC Workshop	68
37	gTLD Registries Stakeholder Group	67
38	GNSO Next-Generation RDS PDP F2F Meeting	67
39	DNS Industry in the Middle East	66
40	ICANN Board with Technical Experts Group	65
41	Registration Data Access Protocol (RDAP) Implementation	63
42	Non Commercial Stakeholder Group Open meeting	62
43	ccNSO Members Meeting Day 2	61
44	From Newcomer to Review Enthusiast: Getting Started with Reviews	60
45	GNSO Working Session	59
46	Commercial and Business Users Constituency (CBUC) [C]	59
47	GAC PSWG and ASO/NRO workshop	58
48	Middle East Strategy Update Session and the Way Forward	56
49	2016 NomCom Public Meeting	56
50	GNSO New gTLD Subsequent Procedures PDP WG	56

# ICANN55 Session Statistics Data

## **Overall Meeting Statistics**

Total Session Counts	350
Total Session Hours	568.5
Actual Attendance for all Sessions	9617
Checked-In Registrations	2273

## **Counts By Event Type**

Closed-Posted Online Total Session Count	57
Closed-Posted Online Total Session Hours	95.75
Closed-Posted Online Actual Attendance Counts	687
Open-Posted Online Total Session Count	153
Open-Posted Online Total Session Hours	333.25
Open-Posted Online Actual Attendance Counts	8773
Sign Up Rooms Total Session Count	77

Room	Session Count	Event Hours	Attendance
1. Atlas	22	30.50	2818
Cristal	15	51.50	2108
Roseraie	26	42.25	699
2. Toubkal	13	29.50	670
Diamant	17	44.00	666
Palmeraie	19	54.25	637
Opale	28	41.25	456
Oliveraie	12	36.75	449
Amethyste	28	39.50	374
J. Andalou	7	8.75	219
Orangerie	15	32.75	175
Emeraude	17	39.75	130
Coupole	17	35.25	127
Amandier	17	47.50	48
Yacourt	16	35.00	41

# **ICANN55 Technical Report**

## Mobile App Statistics

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

# ICANN55 Mobile App Statistics

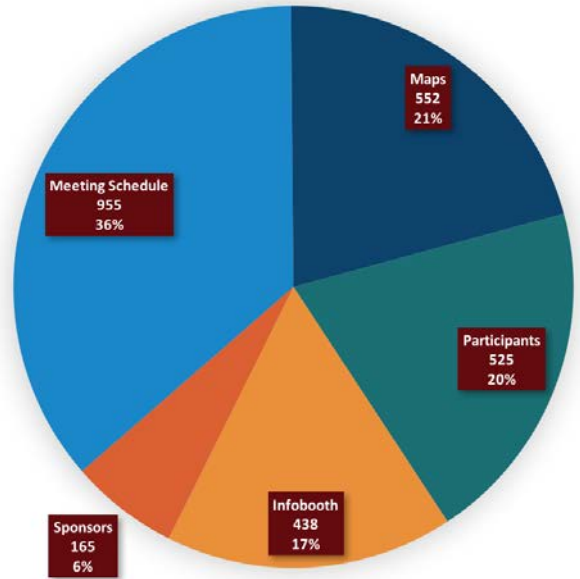
Mobile App | [meetingapp.icann.org](http://meetingapp.icann.org)

The charts on this page show the ICANN meeting mobile app usage. We provided the first mobile app in a beta state for ICANN54 in Dublin, Ireland. The ICANN55 mobile app was the second iteration, and was available in the various app stores.

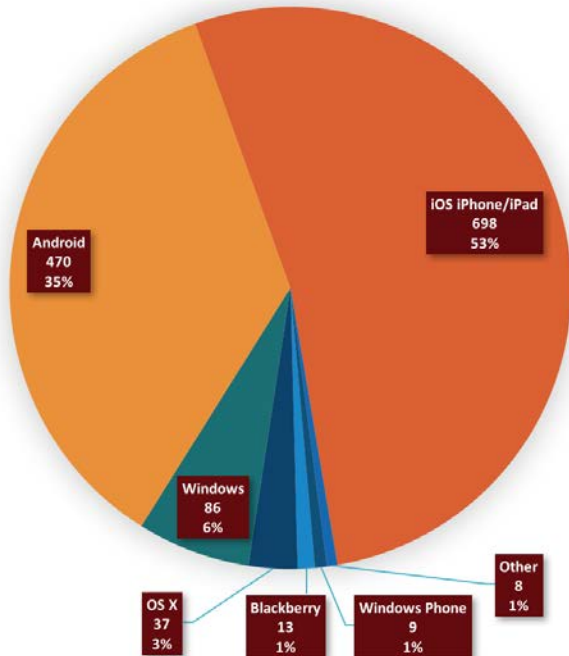
ICANN will continue to enhance the participants' mobile app experience.



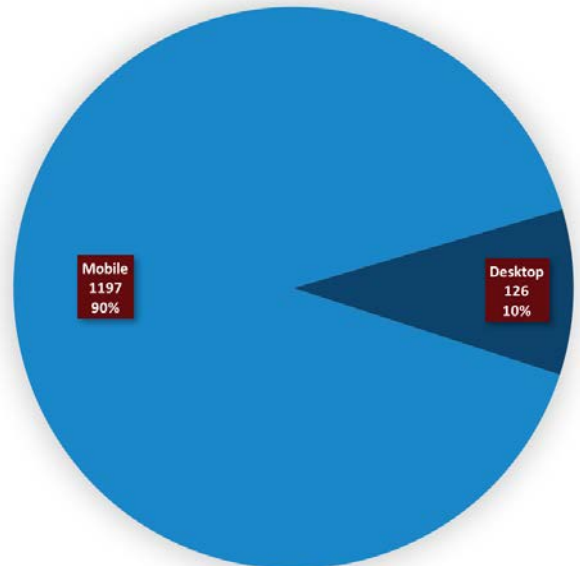
Top Viewed Modules



Mobile App Usage by Device Type

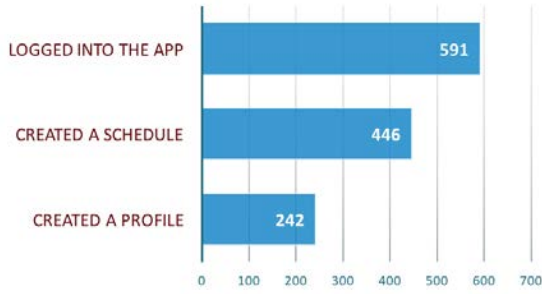


Mobile vs. Desktop Usage

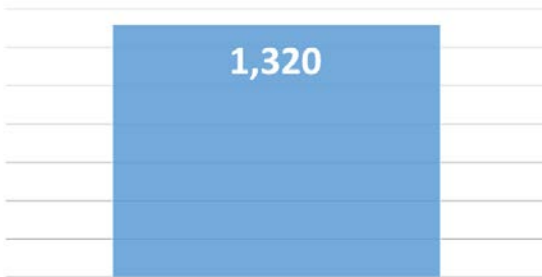


# ICANN55 Mobile App Statistics

## Mobile App Attendee Interaction



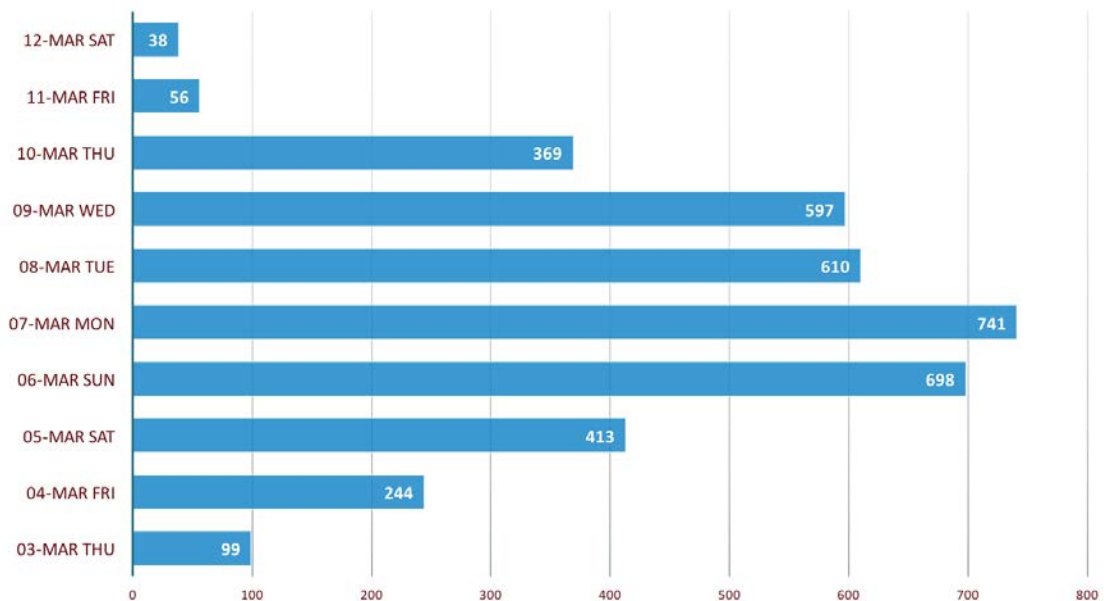
## Total Unique Visitors



## Total Pageviews



## Unique Visitors by Day



# ICANN55 Mobile App Statistics Data

<b>Top Views - Meeting Schedule</b>	<b>Unique Visitors</b>	<b>Pageviews</b>
Tribute to Fadi Chehade and AFRALO Showcase	183	301
GAC High Level Governmental Meeting	171	370
How it Works: Overview and workings of the World Wide Web Consortium (W3C)	154	323
Fellowship Morning Meeting	153	285
Welcome & President's Opening Session	150	259
Public Forum 1	116	173
GNSO Working Session	111	238
How It Works: Domain Name Registry Protocols	111	213
Tech Day	109	253
Joint Meeting of the ICANN Board & the At-Large	100	151

<b>Top Viewed Sections</b>	<b>Unique Visitors</b>	<b>Pageviews</b>
Meeting Schedule	955	26741
Maps	552	2975
Participants	525	2412
Infobooth	438	2015
Sponsors	165	302

<b>Top Views - By Date</b>	<b>Unique Visitors</b>	<b>Pageviews</b>
03-Mar Thu	99	1630
04-Mar Fri	244	4528
05-Mar Sat	413	9554
06-Mar Sun	698	16723
07-Mar Mon	741	18054
08-Mar Tue	610	12110
09-Mar Wed	597	10522
10-Mar Thu	369	4441
11-Mar Fri	56	360
12-Mar Sat	38	235
Totals	1320	78157

<b>Mobile App Device Breakdown</b>	
iOS iPhone/iPad	698
Android	470
Windows	86
OS X	37
Blackberry	13
Windows Phone	9
Other	8
Total Mobile Devices	1197
Total Desktop Users	126

<b>Mobile App Attendee Behavior</b>	
Created a Profile	242
Created a Schedule	446
Logged Into the App	591
Created a Schedule	446
Total sessions favorited	6597
Took Notes	18
Total Notes	24

# **ICANN55 Technical Report**

## **Remote Participation Statistics**

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016



# ICANN55 Remote Participation

## Remote Participation

A very important facet of ICANN meetings is remote participation. This section presents metrics related to the services provided on-site during meetings.

### Services Provided:

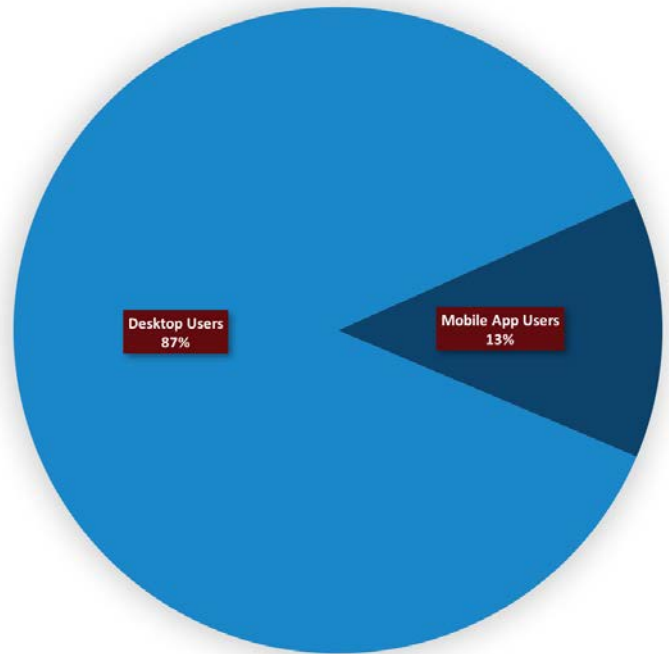
**Adobe Connect** – Visual platform with presentations, participant chat, video of session room and other tools. Recordings of meetings are posted after the session concludes. A mobile app version is also available on app stores.

**Video Streaming** – Video and audio streamed live to Livestream.com, primarily for High Interest Topic sessions.

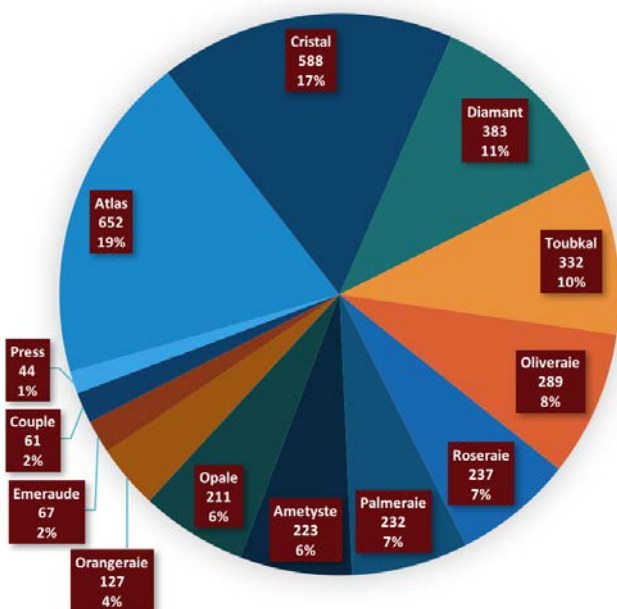
**Audio Streaming** – MP3 audio links for all languages available for a session, giving participants a choice of language. There are high quality streams for participants with broadband connections, and a low bandwidth stream for those with limited connectivity.

**Scribing** – Closed captioning is a live stream of text transcribed from the session’s audio, and is available in English for several sessions.

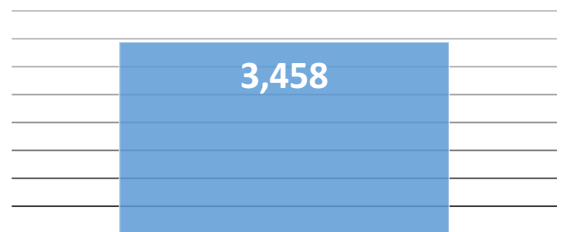
## Adobe Connect Mobile App vs. Desktop Users



## Adobe Connect Unique Users By Session Room



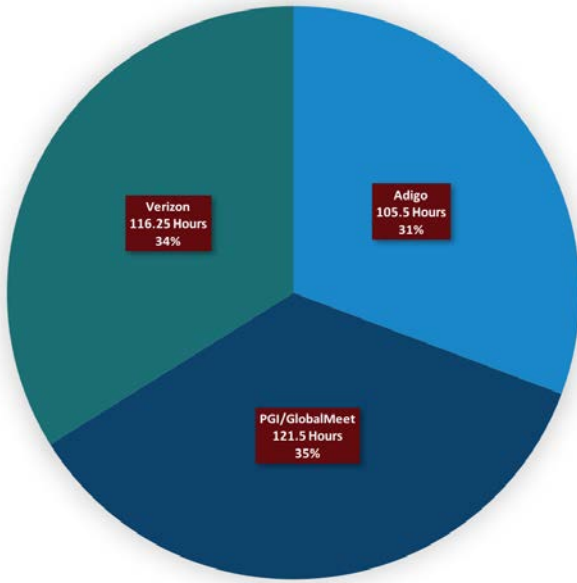
## Adobe Connect Total Unique Participants



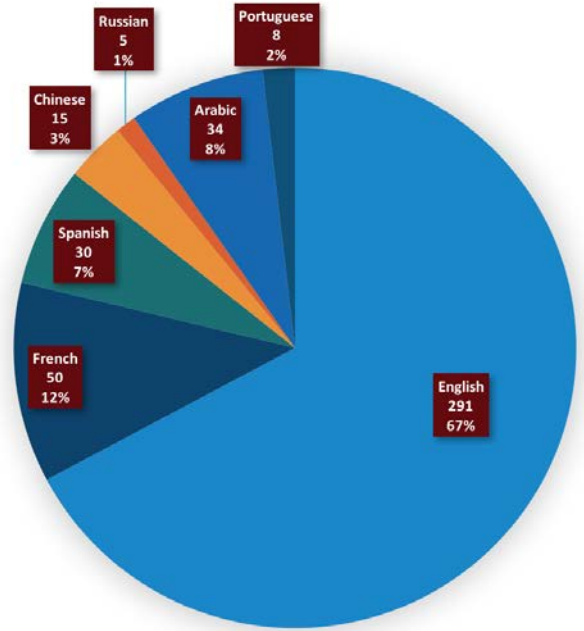
This count includes participants connected on-site to Adobe Connect. In the near future, we hope to improve the breakdown of this data to include on-site participants vs. remote participants.

# ICANN55 Remote Participation

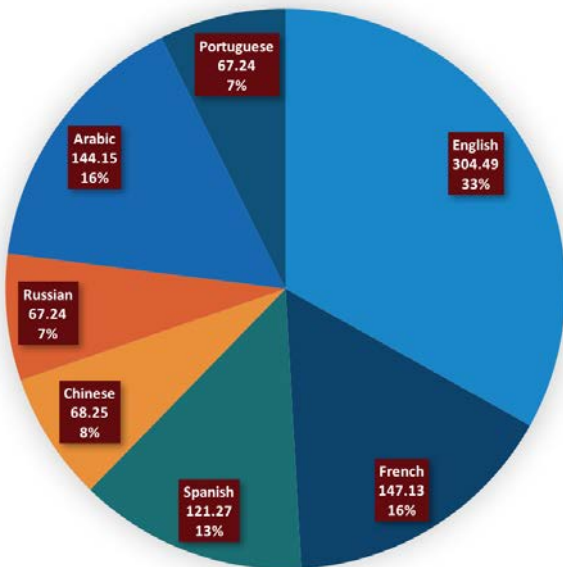
Scheduled Telephony Calls by Provider



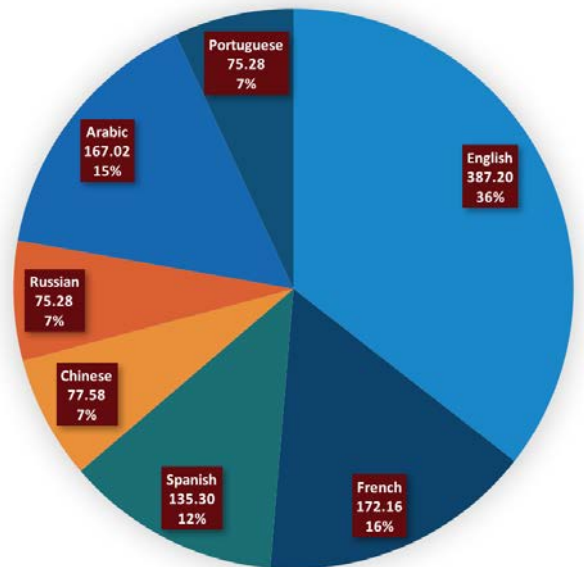
Total Streaming Audio Listeners



Total Streaming Hours [HH.MM]



Total Recorded Hours [HH.MM]



# ICANN55 Remote Participation

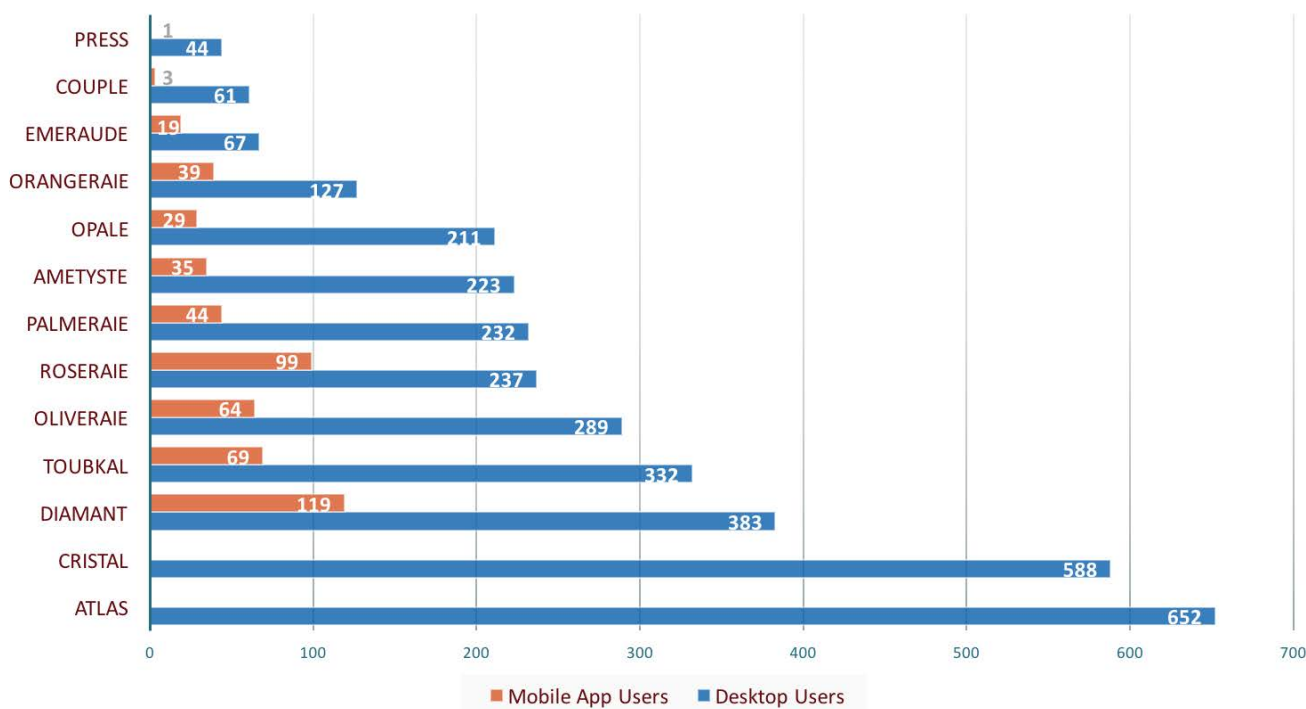
## Remote Participation – Top 50 Sessions

This list ranks the top 50 sessions based on the peak count of listeners to the web audio stream. All open sessions provide web audio streams. “N/A” denotes that a specific language was not available for a session. These numbers reflect the combined number of listeners for both the high-bandwidth and low-bandwidth audio stream.

Session Title	Web Audio Stream Listeners						
	English	French	Spanish	Chinese	Russian	Portuguese	Arabic
1 Welcome & President's Opening Session	36	5	2	1	0	0	3
2 GAC High Level Governmental Meeting	14	2	3	1	1	1	1
3 Public Forum 1	12	3	2	1	0	0	1
4 IANA Stewardship Transition Implementation	11	2	2	1	0	0	1
5 Public Forum 2	10	1	2	0	0	1	0
6 GAC Saturday sessions	9	2	2	1	1	0	0
7 LAC Space	9	N/A	N/A	N/A	N/A	N/A	N/A
8 GAC Sunday morning sessions	7	1	0	0	0	0	2
9 ICANN Public Board Meeting	7	1	1	0	0	1	1
10 GAC meeting with the ICANN Board	6	1	2	1	1	1	0
11 CCWG-Accountability Face to Face Meeting	5	N/A	N/A	N/A	N/A	N/A	N/A
12 GNSO Working Session	5	N/A	N/A	N/A	N/A	N/A	N/A
13 New gTLD Program Reviews and Related Activities	5	1	0	N/A	N/A	N/A	1
14 GAC Tuesday afternoon sessions	5	0	1	0	0	1	1
15 GAC Sunday afternoon sessions	4	1	0	2	1	0	1
16 ICANN Meeting 55 - Tech Day	4	N/A	N/A	N/A	N/A	N/A	N/A
17 From Newcomer to Review Enthusiast: Getting Started with Reviews	4	2	N/A	N/A	N/A	N/A	1
18 Joint ccNSO/GNSO Council meeting	4	N/A	N/A	N/A	N/A	N/A	N/A
19 CCWG-Accountability Engagement Session	4	0	2	0	0	0	0
20 Registration Data Access Protocol (RDAP) Implementation	4	0	0	N/A	N/A	N/A	0
21 Exploring the "public interest" within ICANN's remit	4	0	1	0	0	0	0
22 GAC Tuesday morning sessions	4	2	2	0	0	0	1
23 Joint Meeting of the ICANN Board & Contracted Party House (Rg & Rr)	4	0	0	0	0	0	0
24 DNS Industry Middle East	4	1	N/A	N/A	N/A	N/A	3
25 DNSSEC Workshop	4	1	N/A	N/A	N/A	N/A	0
26 GNSO Working Session	3	N/A	N/A	N/A	N/A	N/A	N/A
27 ALAC Strategy and Working Session Part 1	3	3	1	N/A	N/A	N/A	2
28 Universal Acceptance Steering Group Workshop (UASG)	3	N/A	N/A	N/A	N/A	N/A	N/A
29 Newcomer ICANN overview Day	3	3	1	N/A	N/A	N/A	2
30 Thick Whois Policy Implementation - Meeting with the IRT	3	N/A	N/A	N/A	N/A	N/A	N/A
31 ccNSO Members Meeting Day 1	3	N/A	N/A	N/A	N/A	N/A	N/A
32 Registrar Stakeholder Group 2	3	N/A	N/A	N/A	N/A	N/A	N/A
33 ICANN55 - Intellectual Property Constituency (IPC)	3	N/A	N/A	N/A	N/A	N/A	N/A
34 Joint Meeting of the ICANN Board & the Non-Commercial Stakeholders	3	0	0	0	0	0	0
35 ccNSO Council Meeting	3	N/A	N/A	N/A	N/A	N/A	N/A
36 Universal Acceptance of All TLDs	3	0	0	N/A	N/A	N/A	0
37 Industry Best Practices -- the DNA's Healthy Domains Initiative	3	1	0	3	0	0	0
38 GNSO Council Public Meeting	3	0	0	N/A	N/A	N/A	0
39 GAC meeting on two character codes Implementation	3	1	1	1	1	2	1
40 Africa Strategy and looking ahead	3	1	0	0	0	0	0
41 ICANN Board with Technical Experts Group	3	N/A	N/A	N/A	N/A	N/A	N/A
42 ALAC Strategy and Working Session Part 2	1	2	0	N/A	N/A	N/A	0
43 How it Works: Overview and workings of the World Wide Web Consortium (W3C)	2	N/A	N/A	N/A	N/A	N/A	N/A
44 ALAC and Regional Leadership Working Session Part 1	1	0	0	N/A	N/A	N/A	2
45 ALAC and Regional Leadership Working Session Part 2	0	2	1	N/A	N/A	N/A	1
46 DNSSEC for Everybody: A Beginner's Guide	2	1	0	N/A	N/A	N/A	0
47 Geo TLD Interest Group	2	N/A	N/A	N/A	N/A	N/A	N/A
48 Registrars and Law Enforcement	2	N/A	N/A	N/A	N/A	N/A	N/A
49 Middle East Strategy Update Session and the Way Forward	1	1	N/A	N/A	N/A	N/A	2
50 Francophonie Coordination	N/A	2	N/A	N/A	N/A	N/A	N/A

# ICANN55 Remote Participation Data

## Adobe Connect Mobile App vs. Desktop | By Session Room



### Remote Participation - Adobe Connect

Total Participant Connections	9245
Total Unique Participants	3458
Tablet Connections	26128
Mobile Phone Connections	18848
Mobile Users	521
Mobile Minutes	15526

### Overall Resource Usage

Adigo Phone Conference Bridge Calls	45
Adigo Phone Conference Total Hours	105.5
PGI/GlobalMeet Conference Bridge Calls	30
PGI/GlobalMeet Conference Total Hours	121.5
Verizon Conference Bridge Calls (by session)	48
Verizon Conference Total Hours	116.25
Remote Participation Manager Requests	146
Remote Participation Manager Total Hours	344.35

### Mobile App Usage

Mobile App Total Unique Visitors	1320
Mobile App Total Pageviews	78157

# ICANN55 Remote Participation Data

Web Streaming Hours [hh.mm]	
English	304.49
French	147.13
Spanish	121.27
Chinese	68.25
Russian	67.24
Arabic	144.15
Portuguese	67.24
<b>Total</b>	<b>919.77</b>

Recorded Hours [hh.mm]	
English	387.20
French	172.16
Spanish	135.30
Chinese	77.58
Russian	75.28
Arabic	167.02
Portuguese	75.28
<b>Total</b>	<b>1091:02</b>

Web Streaming Listeners	
English	291
French	50
Spanish	30
Chinese	15
Russian	5
Arabic	34
Portuguese	8
<b>Total</b>	<b>433</b>

## Total Recorded Hours of Audio

1091 Hours

45.5 Days

719 Rotations of ISS to orbit earth

Room	Adobe Connect Desktop Users	Adobe Connect Mobile App Users
Atlas	652	N/A
Cristal	588	N/A
Diamant	383	119
Toubkal	332	69
Oliveraie	289	64
Roseraie	237	99
Palmeraie	232	44
Ametyste	223	35
Opale	211	29
Orangeriaie	127	39
Emeraude	67	19
Couple	61	3
Press	44	1

Room	Total Connections	Unique Users	Mobile Users	Total Mobile Minutes
Ametyste	464	223	35	589
Atlas	1867	652	N/A	N/A
Couple	116	61	3	10
Cristal	2157	588	N/A	N/A
Diamant	1103	383	119	3686
Emeraude	151	67	19	327
Oliveraie	634	289	64	1425
Opale	453	211	29	712
Orangeriaie	212	127	39	1440
Palmeraie	563	232	44	1170
Press	81	44	1	21
Roseraie	761	237	99	3890
Toubkal	671	332	69	2256
Yacourt	12	12	0	0
<b>TOTALS</b>	<b>9245</b>	<b>3458</b>	<b>521</b>	<b>15526</b>

# **ICANN55 Technical Report**

## General Information

**I C A N N | 5 5**  
**M A R R A K E C H**  
5 – 10 March 2016

# ICANN55 General Information

## ICANN Equipment Shipped to ICANN55

Much like a touring band, ICANN learned over time that the most cost-effective method of ensuring that meeting participants have a positive experience is to sea freight our own equipment to ICANN meetings. We ship critical equipment, then rent the remaining equipment locally to help promote the economy.

The following depicts the equipment shipped to ICANN55.



### ICANN Owned Equipment Shipment Weight



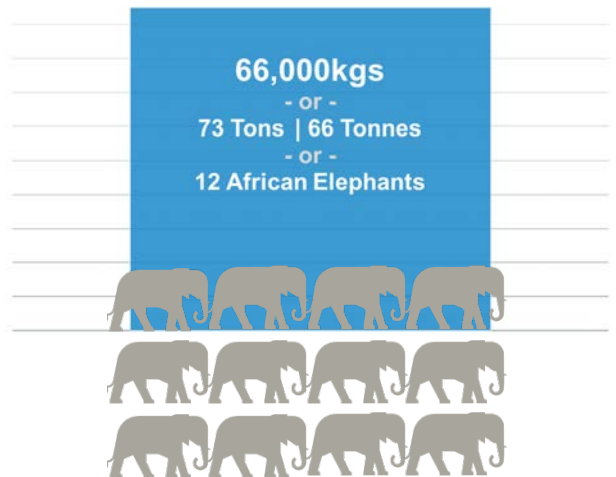
### ICANN Owned Equipment Cases Shipped



### Congress Rental Interpretation Equipment Shipment Weight



### Advision Audio Visual Equipment Shipment Weight



# ICANN55 General Information

Equipment Deployed for ICANN55

**ICANN|55**  
**MARRAKECH**

5 – 10 March 2016

Conference Microphones



**412**

Wireless Access Points



**104**

Laptops



**73**

Mac Minis



**53**

Telephones



**56**

Switches



**48**

Printers



**28**

Registration iPads



**12**

Audio/Video Streamers



**10**

Routers



**3**

Video Camera Kits



**3**



# **ICANN55 Technical Report**

## Network Operations Center

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

# ICANN55 Network Operations Center

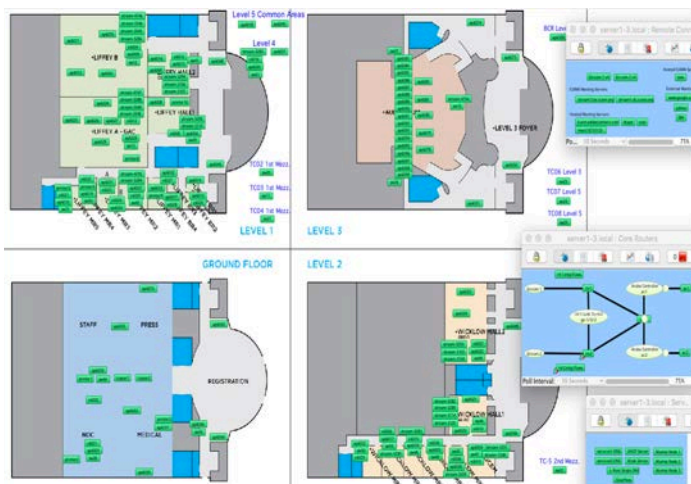
## Session Monitoring

The Network Operations Center (NOC) monitors all session rooms, including audio streams, recordings, Wi-Fi associations, connectivity stability, room temperatures and technician status. At any time, NOC staff can look at the monitoring screen and get a real-time status check on any session room.

Below is a screenshot taken during ICANN55 of the monitoring software.



The NOC uses InterMapper to monitor all active equipment deployed into various areas of the venue. The tool enables the NOC to respond quickly to power outages, network problems and equipment failures.



# ICANN55 Network Operations Center

## Meetings Technical Services Team

People are key to the success of ICANN meetings. Several teams of people help manage every aspect of a meeting. Our Meetings Technical Services (MTS) team includes: meeting managers, audio visual technicians, interpreters, scribes (closed captionists), remote participation managers, IT technicians and video technicians. Many other teams outside the technical scope help make the meetings a success.

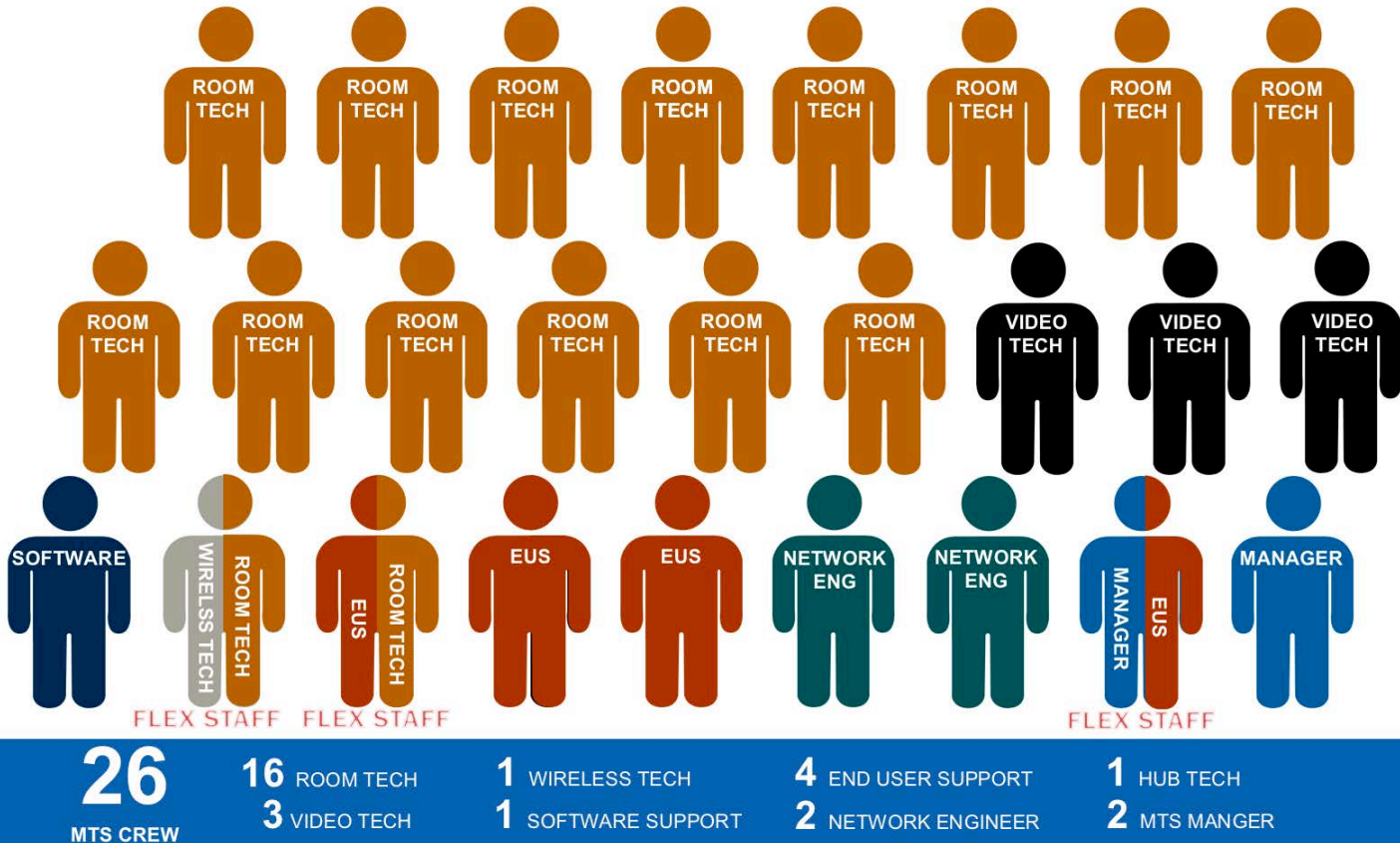
### Hours Worked by the MTS Team



## Meetings Technical Services Team | ICANN55



## Breakdown of MTS Team by Role



# ICANN55 Network Operations Center



## Shipment of Equipment

Over 70 cases ship around the world from meeting location to meeting location. This equipment returns back to Los Angeles, CA, USA, only once a year for restocking and repairs.

## Typical Session Room Setup

A typical meeting room is set up with a VoIP phone, several Wi-Fi access points, two to four Mac Minis, and one or two switches.



## Video Setup

Three operator-controlled PTZ camera systems are available for large session rooms. This system streams video via Adobe Connect, and in some rooms, via Livestream HD video.

# **ICANN55 Technical Report**

## Network Statistics and Client Profiles

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

# ICANN55 Network Statistics

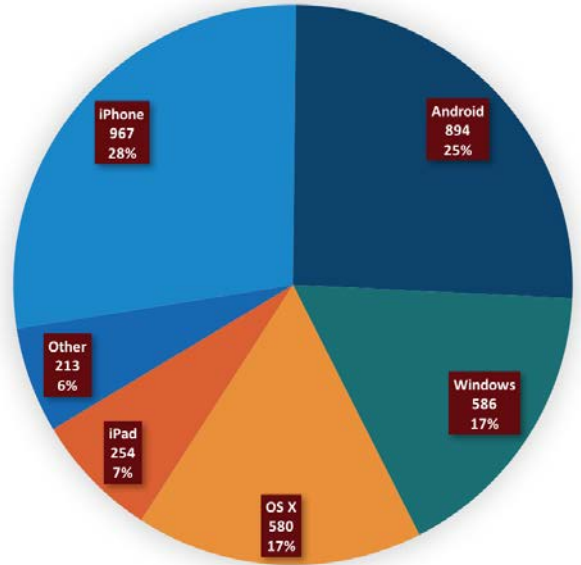
## Overall Network Usage and Statistics

The ICANN Meetings Technical Services team operates primarily with Juniper routers and switches, with a small number of legacy Cisco switches. For the wireless infrastructure, we use Aruba access points, including Aruba wireless controllers.

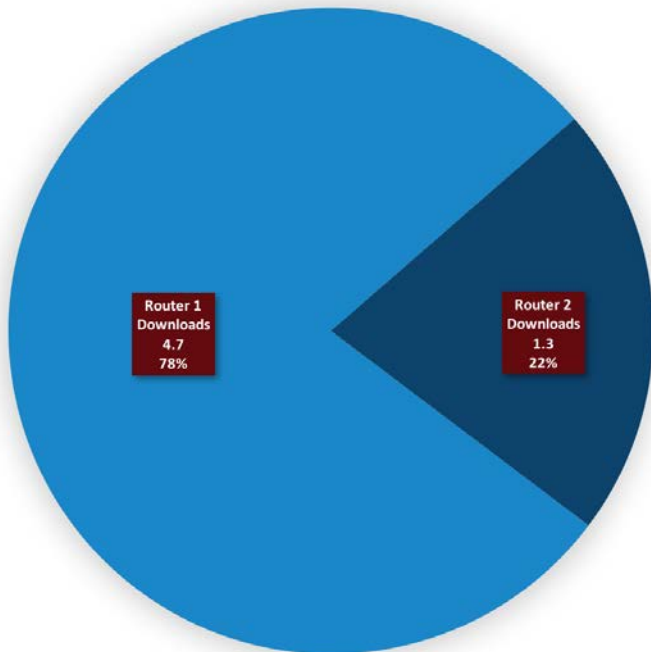
In the “General Information” section, we provide the inventory of IT equipment that ICANN brings to each meeting to meet the unique challenges of each venue.

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

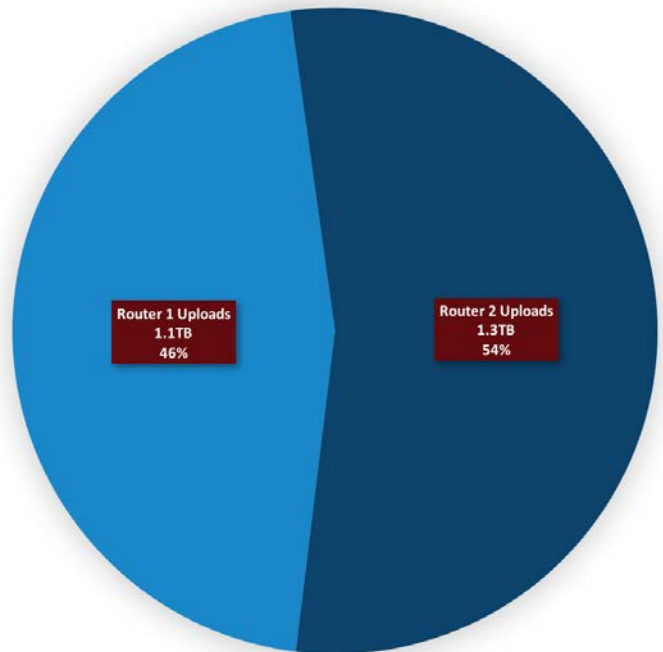
## Clients by Device Type



## Download Traffic



## Upload Traffic



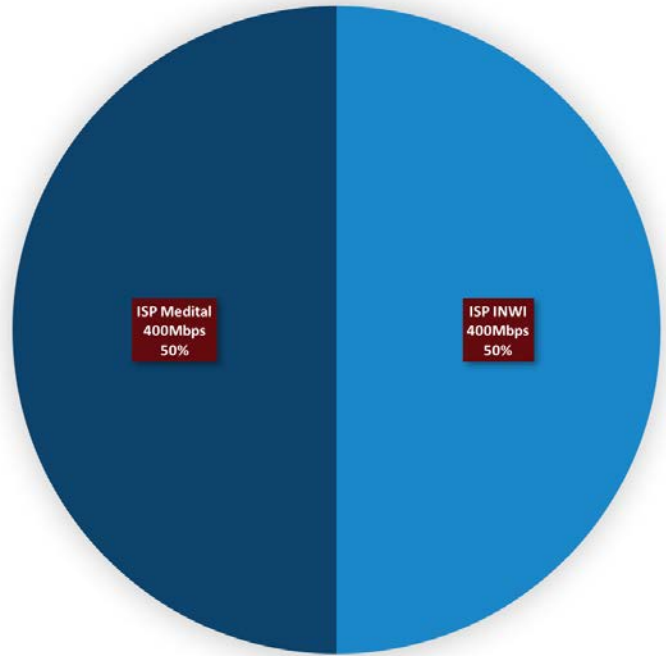
# ICANN55 Network Statistics

## Bandwidth Consumption and Allocation

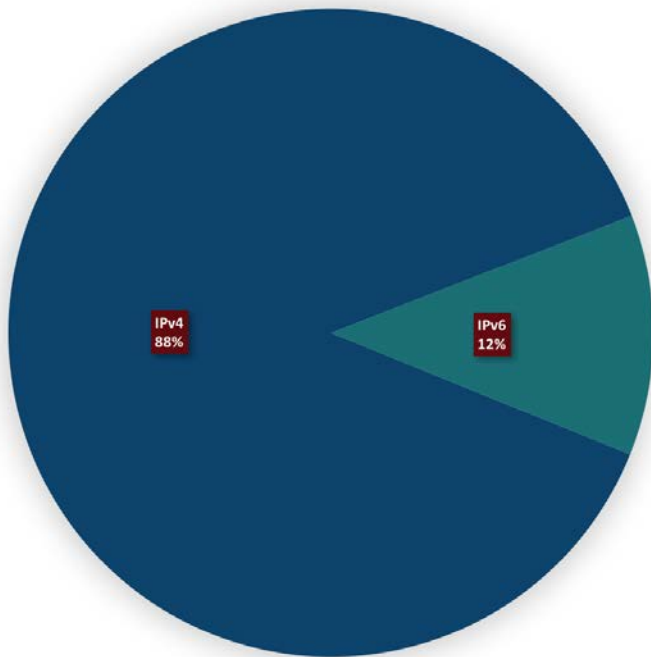
These charts show the bandwidth that was provided and consumed, and the traffic allocation between IPv4 and IPv6.

**ICANN|55**  
**MARRAKECH**  
5 – 10 March 2016

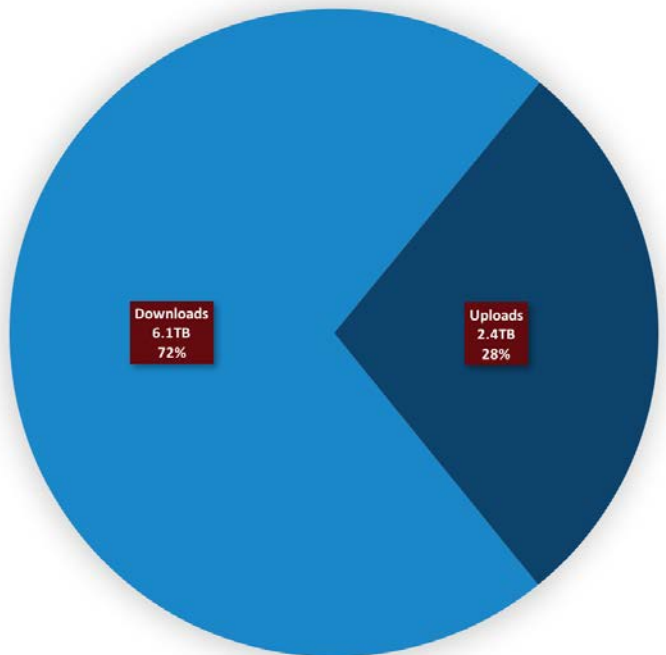
## Internet Service Providers



## Traffic Allocation



## Data Consumption



# ICANN55 Network Statistics

## Wi-Fi Client Associations and Bandwidth

During an ICANN meeting, the Meetings Technical Services team closely monitors the network load and Wi-Fi associations to each wireless access point. Alerts notify the NOC team when a maximum number of users are associated to a single access point. The team responds promptly by mitigating issues with access points or deploying more access points.

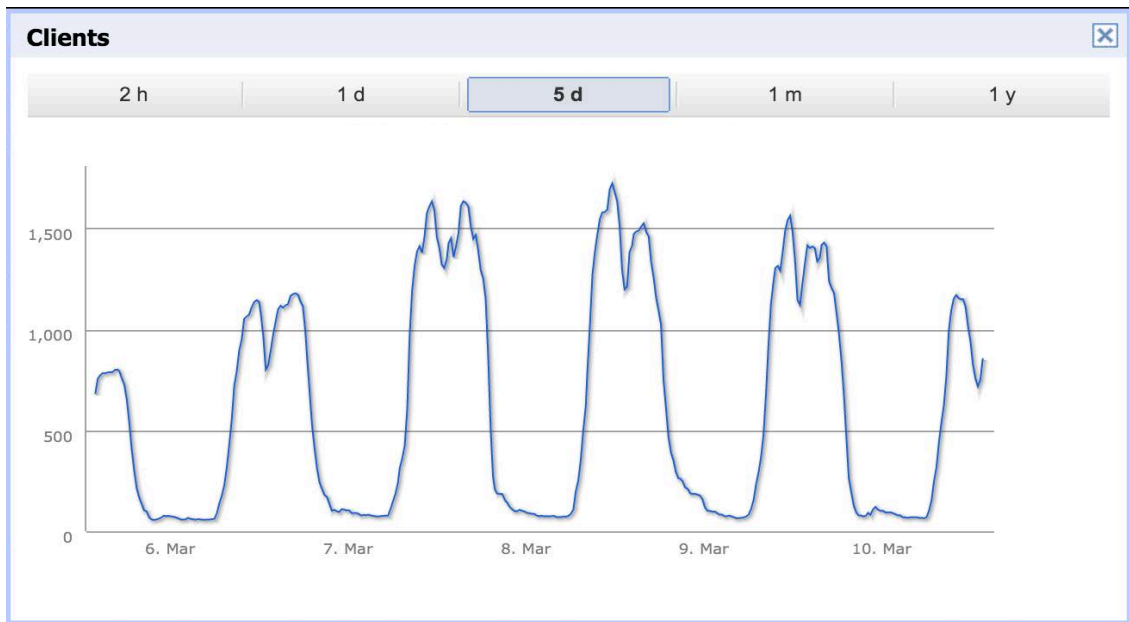
Great care and time go into the deployment plan for wireless access points. The team works with our wireless vendor Aruba to ensure the best possible configuration of device profiles.

Our goal is to ensure the highest quality experience for all attendees on the ICANN network.

### Peak Wi-Fi Client Associations Tuesday 8-Mar-16

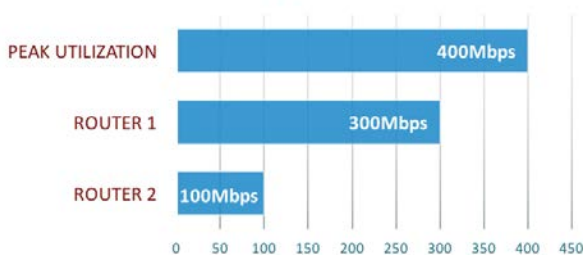


## Wi-Fi Client Associations | by Day



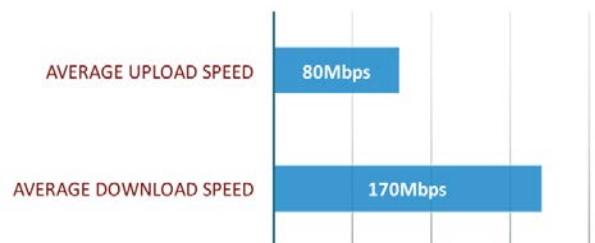
### Peak Bandwidth Utilization

Tuesday 8-Mar-16



### Bandwidth Speed

[During Business Hours per 30min]

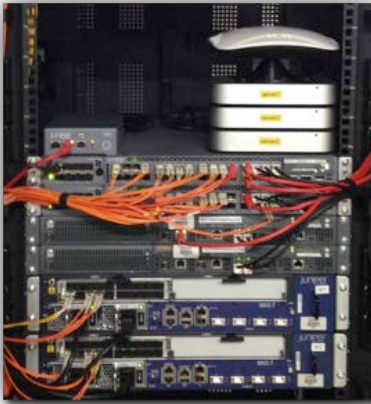




# ICANN55 Network Statistics

## Average Bandwidth Utilization

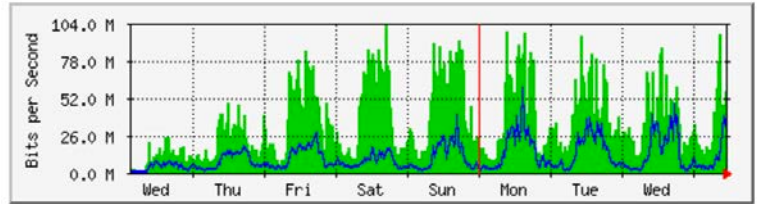
ICANN runs our core network from two redundant routers. These graphs show the weekly 30-minute average bandwidth consumption.



ICANN MTS Core Network

### Router 1

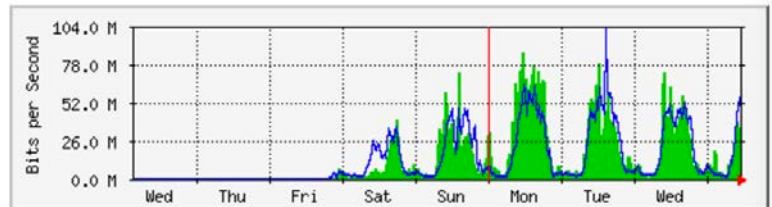
#### 'Weekly' Graph (30 Minute Average)



	Max	Average	Current
In	101.9 Mb/s (10.2%)	33.7 Mb/s (3.4%)	57.0 Mb/s (5.7%)
Out	58.4 Mb/s (5.8%)	10.7 Mb/s (1.1%)	28.6 Mb/s (2.9%)

### Router 2

#### 'Weekly' Graph (30 Minute Average)



	Max	Average	Current
In	85.9 Mb/s (8.6%)	18.5 Mb/s (1.8%)	24.8 Mb/s (2.5%)
Out	101.2 Mb/s (10.1%)	17.8 Mb/s (1.8%)	44.2 Mb/s (4.4%)

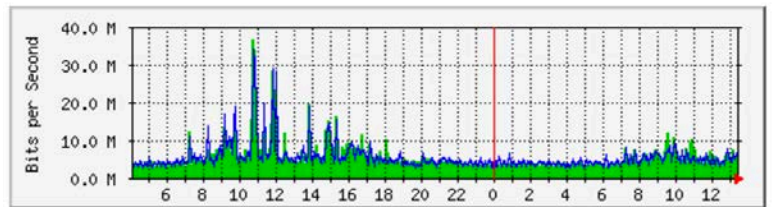
## Akamai On-Site CDN

ICANN is proud to be supported on location by Akamai, provider of Content Delivery Network (CDN) services. Akamai helps ensure that the ICANN meeting network is fast, reliable and secure.



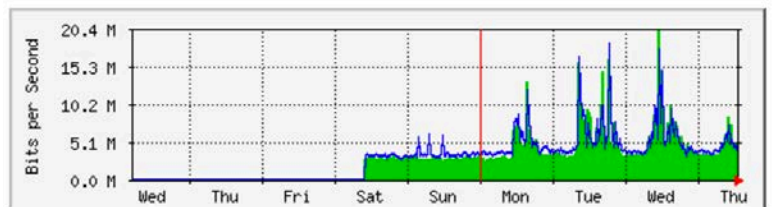
### Akamai CDN Server Traffic

#### 'Daily' Graph (5 Minute Average)



	Max	Average	Current
In	36.5 Mb/s (0.8%)	5271.1 kb/s (0.1%)	5475.8 kb/s (0.1%)
Out	33.8 Mb/s (0.8%)	5146.8 kb/s (0.1%)	5730.9 kb/s (0.1%)

#### 'Weekly' Graph (30 Minute Average)



	Max	Average	Current
In	20.1 Mb/s (0.5%)	4273.8 kb/s (0.1%)	4932.5 kb/s (0.1%)
Out	18.3 Mb/s (0.4%)	4553.7 kb/s (0.1%)	5028.2 kb/s (0.1%)

# ICANN55 Network Statistics Data

## Wireless Associations – Top 25 Sessions

This list shows the top 25 sessions based on peak wireless client associations. We typically find that Wi-Fi associations represent about a 1:1 ratio of actual attendees in the session room. This ratio varies slightly from 1:1 to 1:1.25 for wireless clients vs. actual attendee count, depending on session content, time of day, and other variables.

	Session Title	Wireless Clients
1	Welcome & President's Opening Session	1109
2	Public Forum 1	639
3	Public Forum 2	593
4	ICANN Public Board Meeting	527
5	IANA Stewardship Transition Implementation	391
6	GAC High Level Governmental Meeting	362
7	Joint Meeting of the ICANN Board & Contracted Party House (Rg & Rr)	320
8	New gTLD Program Reviews and Related Activities	307
9	GAC meeting with the ICANN Board	263
10	GNSO Council Public Meeting	251
11	Exploring the "public interest" within ICANN's remit	245
12	CCWG-Accountability Engagement Session	226
13	Industry Best Practices -- the DNA's Healthy Domains Initiative	225
14	Africa Strategy and looking ahead	220
15	Joint Meeting of the ICANN Board & the Non-Commercial Stakeholders	213
16	GAC Tuesday morning sessions	210
17	GAC Sunday afternoon sessions	208
18	GAC Sunday morning sessions	207
19	ccNSO Members Meeting Day 1	207
20	GAC Saturday sessions	195
21	GAC Tuesday afternoon sessions	182
22	Newcomer ICANN overview Day	176
23	ICANN Meeting 55 - Tech Day	173
24	Registrar Stakeholder Group 2	166
25	ccNSO Council Meeting	163

# ICANN55 Network Statistics Data

Bandwidth	Mbps
ISP INWI	400
ISP Medital	400
Total Bandwidth Available	800

Total Data transferred In/Out of Network	TB
Router 1 - Inbound	4.7
Router 1 - Outbound	1.1
Router 2 - Inbound	1.3
Router 2 - Outbound	1.3
Downloads	6.1
Uploads	2.4

Averages during Operational load hours (30 min Average)	Mbps
Average Download Speed	170
Average Upload Speed	80

Peak Bandwidth Utilization	Mbps
Peak Date	8-Mar-16
Router 2	100
Router 1	300
Peak Utilization	400

Peak Wifi Clients	
Peak Date	8-Mar-16
Peak Devices	1723

Clients by Device Type	%
iPhone	27.40%
Android	25.30%
Other	23.60%
OS X	16.40%
iPad	7.20%
Windows*	18.00%

\* Version Aggregation

Total Traffic Allocation	%
IPv4	88%
IPv6	12%

# ICANN55 Network Statistics Data

Wireless Access Point(s)	Unique Clients	Max Clients	Total Data [GB]	Avg Usage
ap6001	1820	18	21.69	193.23 Kbps
ap6003	32	5	6.41	59.03 Kbps
ap6004	73	7	1.81	15.31 Kbps
ap6005	1157	130	59.5	549.21 Kbps
ap6006	53	6	5.81	64.01 Kbps
ap6007	1489	32	37.69	578.22 Kbps
ap6008	1756	79	94.06	1.09 Mbps
ap6009	473	43	43.02	565.42 Kbps
ap6010	340	12	8.23	91.74 Kbps
ap6011	932	132	13	228.52 Kbps
ap6012	1481	58	66.62	1.04 Mbps
ap6013	241	18	5.26	54.97 Kbps
ap6015	1736	117	191.3	2.52 Mbps
ap6016	462	15	24.04	328.11 Kbps
ap6017	762	22	22.88	242.34 Kbps
ap6019	559	29	11.78	119.08 Kbps
ap6020	1072	66	243.63	2.76 Mbps
ap6021	1393	83	133.75	1.48 Mbps
ap6022	747	79	113.29	1.71 Mbps
ap6023	914	79	124.28	1.88 Mbps
ap6024	845	59	167.08	1.79 Mbps
ap6025	888	50	99.29	1.33 Mbps
ap6026	756	73	92.53	1.34 Mbps
ap6027	788	78	118.71	1.72 Mbps
ap6028	893	104	114.98	1.54 Mbps
ap6029	638	58	67.55	906.14 Kbps
ap6031	179	22	36.73	383.51 Kbps
ap6034	1668	84	91.97	1.40 Mbps
ap6036	1048	50	75.33	1.15 Mbps
ap6037	1457	79	250.31	2.94 Mbps
ap6038	408	33	9.51	137.97 Kbps
ap6039	1220	72	123.77	1.45 Mbps
ap6040	543	38	69.7	1.05 Mbps
ap6047	871	36	36.85	566.71 Kbps
ap6048	242	23	4.91	49.73 Kbps
ap6049	1318	25	41.91	424.57 Kbps
ap6050	925	30	71.13	658.85 Kbps
ap6051	528	9	13.95	129.69 Kbps
ap6052	975	100	320.71	2.98 Mbps
ap6053	497	41	269.62	2.61 Mbps
ap6057	1454	64	82.87	1.05 Mbps
ap6059	2354	135	94.07	1.07 Mbps
ap6060	525	23	53.96	618.60 Kbps

# ICANN55 Network Statistics Data

Wireless Access Point(s)	Unique Clients	Max Clients	Total Data [GB]	Avg Usage
ap6063	1645	38	24.96	255.03 Kbps
ap6064	2283	96	98.08	1 Mbps
ap6065	2415	107	118.34	1.24 Mbps
ap6066	959	30	31.27	360.64 Kbps
ap6068	295	13	11.46	132.26 Kbps
ap6069	717	24	16.42	188.52 Kbps
ap6070	1894	53	43.79	502.87 Kbps
ap6071	2167	158	67.9	800.17 Kbps
ap6072	1060	47	89.13	1.31 Mbps
ap6073	455	12	21.78	294.19 Kbps
ap6074	1296	158	153.25	2.01 Mbps
ap6100	502	46	424.09	3.66 Mbps
Oap6192	672	42	101.64	943.44 Kbps
Oap6194	1214	58	69.21	895.51 Kbps
Oap6195	2361	199	35.61	404.38 Kbps
	58447	3397	4842.42	

ap##### = Aruba wireless access point model AP220

oap##### = Aruba outdoor wireless access point model AP270

# ICANN55 Technical Report

For additional information or for comments  
on this report, please contact: [mts@icann.org](mailto:mts@icann.org)

**I C A N N | 5 5**  
**M A R R A K E C H**  
5 – 10 March 2016